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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,769	07/31/2001	Stephen E.M. Billester	29094/12:2	4011

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EXAMINER

CHANG, JON CARLTON

ART UNIT PAPER NUMBER

2623

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/919,769

**Applicant(s)**

BILLESTER, STEPHEN E.M.

**Examiner**

Jon Chang

**Art Unit**

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4 & 5.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

***Specification***

1. The disclosure is objected to because of the following informalities:

In paragraph [0007], the first line, "Manufactures" should be corrected to "Manufacturers".

Appropriate correction is required.

***Drawings***

2. The drawings are objected to because Figures 2 and 3 contain extraneous text such as "CONFIDENTIAL" as well as a copyright notice. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,988,715 to Mullan et al. (hereinafter "Mullan").

Regarding claim 1, Mullan discloses a character recognition method for accurately constructing a result string from a plurality of result sets generated by processing an input string, each result set comprising at least one candidate character with an associated confidence indication, the method comprising the steps of:

selecting a plurality of character types (column 3, lines 35-39; column 3, lines 50-51, 55-56 and 59-60; the "genres" refer to character types);

for each selected character type, creating a candidate string by concatenating a candidate character of the selected character type from each result set (column 3, lines 49-65);

for each created candidate string, combining the associated confidence indication for each concatenated candidate character to form a corresponding combined confidence indication (column 4, lines 29-35; the "joint conditional probabilities"); and selecting as the result string the created candidate string with a most favorable corresponding combined confidence indication (column 4, lines 35-41).

As to claim 2, Mullan discloses the method of claim 1, wherein: each confidence indication is numeric (a conditional probability, e.g., column 4, lines 12-13, is inherently numeric); and the most favorable corresponding combined confidence indication has a greatest combined numeric value (column 4, line 38-41; i.e., the largest product).

With regard to claim 4, Mullan discloses the method of claim 1 further comprising the step of: if there is no candidate character in a result set for a character type, extracting a substitute candidate character of a different character type and ascribing a substitute associated confidence indication for the substitute candidate character (column 5, lines 5-21).

Regarding claim 5, Mullan discloses the method of claim 1 wherein at least one of the selected character types includes a plurality of subset character types (column 7, lines 12-15; e.g., the Japanese character type includes the subset character types Katakana and Romnjii).

Regarding claim 6, Mullan discloses the method of claim 5 wherein the at least one of the selected character types further includes a pattern for positioning the candidate characters of the plurality of subset character types in the corresponding

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created candidate string (e.g., Fig.3, elements 41, 42 or 43; the pattern is linear or sequential).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mullan.

With regard to claim 3, Mullan does not disclose that the combined numeric value is a weighted average. However, a number of different combined numeric values used for representing confidence indications are well known. Among these, the weighted average is well known (Official Notice). Use of a weighted average is seen as a decision based upon designer preference. The weighted average provides an easily computed value, as compared with the conditional probabilities of Mullan. This would have motivated one of ordinary skill in the art to utilize it.

***References Cited***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,261,009 to Bokser discloses a method for identifying characters which calculates the probability of occurrence of each member of a string.

U.S. Patent 5,850,480 to Scanlon discloses an OCR error correction method and apparatus which processes a character field once using a numeric character recognition constraint, once using a alphabetic character recognition constraint, and once with no character recognition constraint. It also preferably looks only to a set of phantom character data which is of the same character type as the lexicon string character being compared at a given time.


#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jon Chang  
Primary Examiner  
Art Unit 2623

Jon Chang  
July 26, 2004